

manufacture affecting their appearance or that may affect their serviceability.

(d) *Performance.* When the rocket is fired from the appliance in accordance with the manufacturer's instructions, it shall be capable of passing the tests specified by § 160.040-5(c).

**§ 160.040-4 Equipment for impulse-projected rocket type line-throwing appliance.**

(a) Four rocket projectiles, each complete with bridle and leader of fire-resistant materials. Two of the projectiles shall be of the buoyant type.

(b) Not less than 4 primer-ejector cartridges which fit the chamber of the pistol, gun, or launcher.

(c) Four service lines, each 4 mm ( $\frac{5}{32}$  in.) minimum diameter with a minimum breaking strength of at least 2,250 N (500 lb.), and in one continual length not less than that specified in the approval of the appliance carried, without splice, knot, or other retarding or weakening features. The length of each service line will be assigned in the approval of the appliance as a round number approximately one-third in excess of the average distance the line is carried in the tests required by § 160.040-7(c). The line shall be of either natural or synthetic fibers suitable for marine usage. The end of the line intended to be attached to the projectile shall have securely attached thereto a substantial tag bearing a permanent legend indicating its purpose, and the other end of the line shall be tagged in the same manner to prevent delay in securing proper and immediate action with the equipment. Each line shall be coiled, faked, or reeled in its own faking box or reel in such manner that when all the line leaves the container, it shall automatically become unattached and free from the container. The faking box or reel shall be big enough for the line. The reel type container shall consist of a reel upon which the line may be readily coiled and a canister or container into which the line may be placed that affords a fair lead through which the line may pay out. The reel must be so designed as to permit easy withdrawal after the line has been coiled. Containers of new lines shall bear the name of the manufacturer, date of

manufacture, and a statement to the effect that in all respects the line meets the requirements of this specification.

(d) [Reserved]

(e) One cleaning rod with wire brush of non-ferrous metal, prongs arranged in a spiral of sufficient rigidity and size to clean the bore.

(f) One can of oil suitable for cleaning and preserving the appliance.

(g) Twelve flannel wiping patches of sufficient size to cover the brush and suitable for wiping the bore clean.

(h) One set of instructions including a list of the equipment furnished with the appliance, information as to the proper maintenance of the appliance and equipment, and directions for loading and firing the appliance in service use shall be permanently engraved in plastic and mounted conspicuously in the case or box required by paragraph (i) of this section.

(i) A suitable case or box, properly compartmented for stowage of the appliance and auxiliary equipment, is required for stowage on merchant vessels. The service line and auxiliary line need not be stowed in the case.

**§ 160.040-5 Approval and production tests.**

(a) *Approval tests.* An independent laboratory accepted by the Commandant under § 159.010 of this chapter must perform or supervise the performance tests in paragraph (c) of this section.

(b) *Production inspections and tests.* Production inspections and tests must be conducted under the procedures in § 159.007 of this chapter. Each appliance or lot of rockets which fails the inspections and tests must not be represented as meeting this subpart or as being approved by the Coast Guard.

(1) *Inspections and tests by the manufacturer.* The manufacturer's quality control procedures must include the inspection of appliances during production as well as inspection of finished appliances, to determine that the appliances are being produced in accordance with the approved plans. The performance tests in paragraph (c) of this section must be performed by the manufacturer.

(2) *Inspections and tests by an independent laboratory.* An independent laboratory accepted by the Commandant under § 159.010 of this chapter must inspect and test appliances and rockets at least once each year. The inspection must determine that the appliances and rockets are being produced in accordance with the appropriate plans. The tests must be in accordance with paragraph (c) of this section.

(c) *Performance tests—(1) Appliances.* Each appliance shall be tested by firing three rounds. These rounds may be regular rockets or buoyant type rockets carrying regular service lines, as provided in paragraph (c)(2) of this paragraph or may be dummy projectiles, of the same size and weight as the regular rocket projectile, expelled into an earthen bank or other resisting medium from a reasonable distance. At least one of the rounds shall be fired using a primer-ejector cartridge loaded with a charge double the normal charge; the other rounds may be fired using regular primer-ejector cartridges. After the firing tests have been completed, each appliance shall be fired twice using the regular primer-ejector cartridges only, for the purposes of demonstrating that the appliance is still in operating condition. The entire assembly of the appliance shall then be examined. Results of the test firing and the physical examination shall show none of the following: Failure to eject cartridge, failure to close breech, trigger malfunction, safety lock failure to function, breech catch malfunction, broken spring, broken handgrips, cracked barrel or discharge chamber, firing pin or plunger broken, distorted or excessively worn or loose breech. A single misfire is acceptable if a second cartridge fires on repeated test. Misfire of both shall be cause for rejection of the appliance. More than one loose screw shall be cause for rejection. If an appliance exhibits a single loose screw, it may be retightened.

(2) *Rockets.* The rocket shall utilize a solid fuel propellant which shall function in accordance with all applicable requirements of MIL-R-23139. The use of black powder for the rocket motor is not acceptable. The ignition of the rocket motor shall occur at such a distance from the appliance so as not to

spew flame, hot gaseous exhaust, or hot particles of propellant in such a manner as to create a hazard to personnel or the vessel. The rocket shall have a service line carrier assembly permanently attached and made of material, or suitably protected, to withstand the heat from the rocket motor's exhaust. From each 200 rockets manufactured, not less than three must be selected to be tested by firing with service line attached. The rockets selected will, over a period of time, include representative samples of both the regular and buoyant type rockets, except that the approval test must include both types. The line shall be carried, under conditions of reasonably still atmosphere, a minimum of 230 m (750 ft.), without breaking or fouling the line, and the rocket shall alight not more than 15 m (50 ft.) from either side of the target line. In no case shall a test rocket be fired without a line attached. After a buoyant type rocket is fired, it shall demonstrate its ability to float in water for not less than 2 hours. Failure to meet any of the test requirements, nose cone cracks, rupture in flight, erratic flight, or unusual burning rate, shall be cause for rejection of rockets produced until suitable correction has been made. If rockets selected from this lot are used for the tests required in paragraph (c)(1) of this section this may be accepted as meeting the requirements of this paragraph.

(3) *Primer-ejector cartridges.* Inasmuch as primer-ejector cartridges are used for the tests required by paragraphs (c)(1) and (2) of this paragraph, additional tests of primer-ejector cartridges will be made only when deemed advisable by the independent laboratory. Misfiring or failure of any kind shall be cause for rejection of cartridges produced until suitable correction has been made.

#### § 160.040-6 Marking and labeling.

(a) The appliance shall be permanently and legibly marked by die-stamping or raised letters with the model designation of the appliance, the manufacturer's serial number for the appliance, the official Coast Guard approval number, and the name of the manufacturer. The rocket-projectiles shall be legibly marked with the name